Five Myths About Innovation

How does innovation *really* happen?

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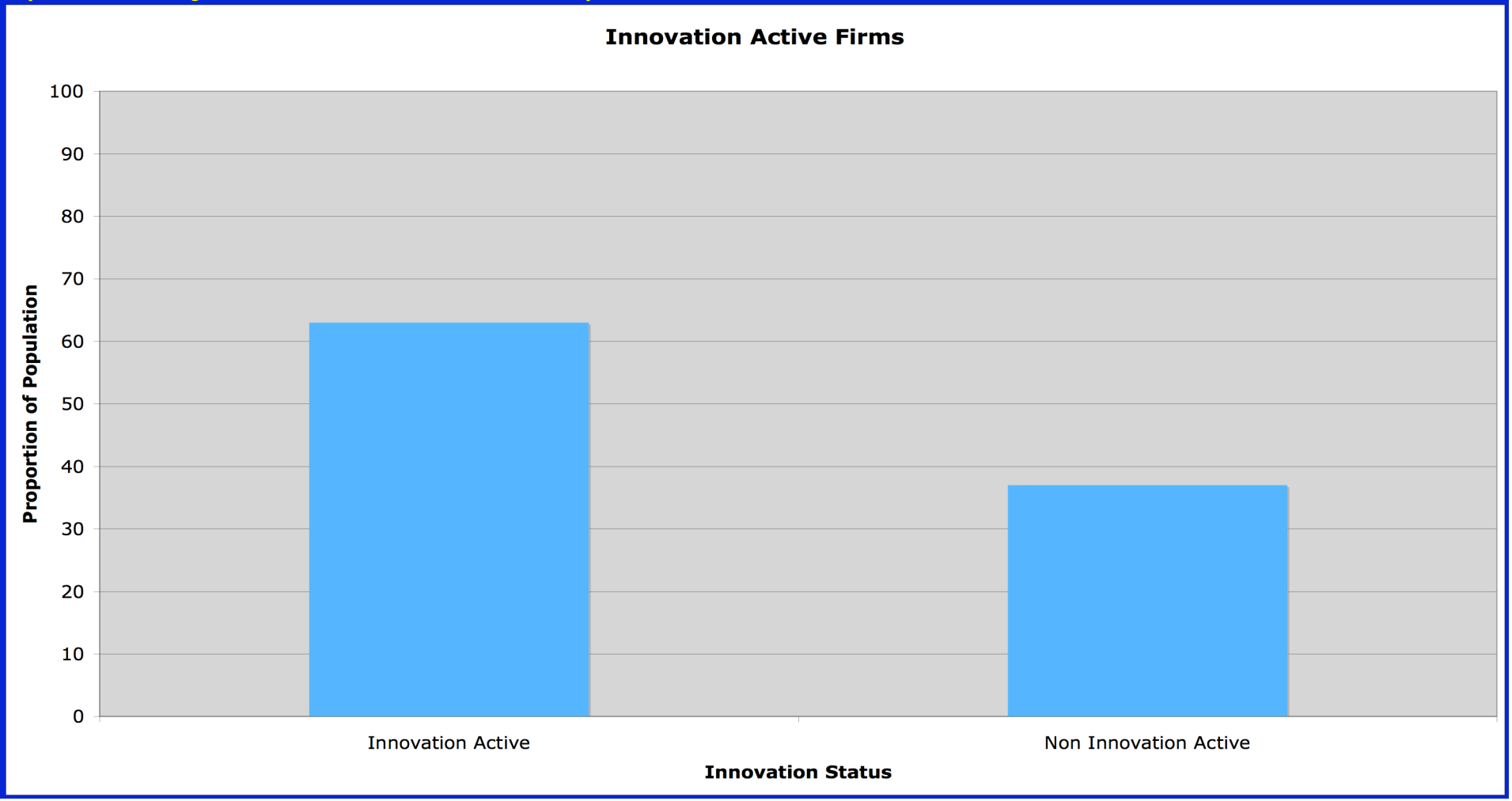
Myth 1:
Australians are good at invention, but bad at commercialisation.

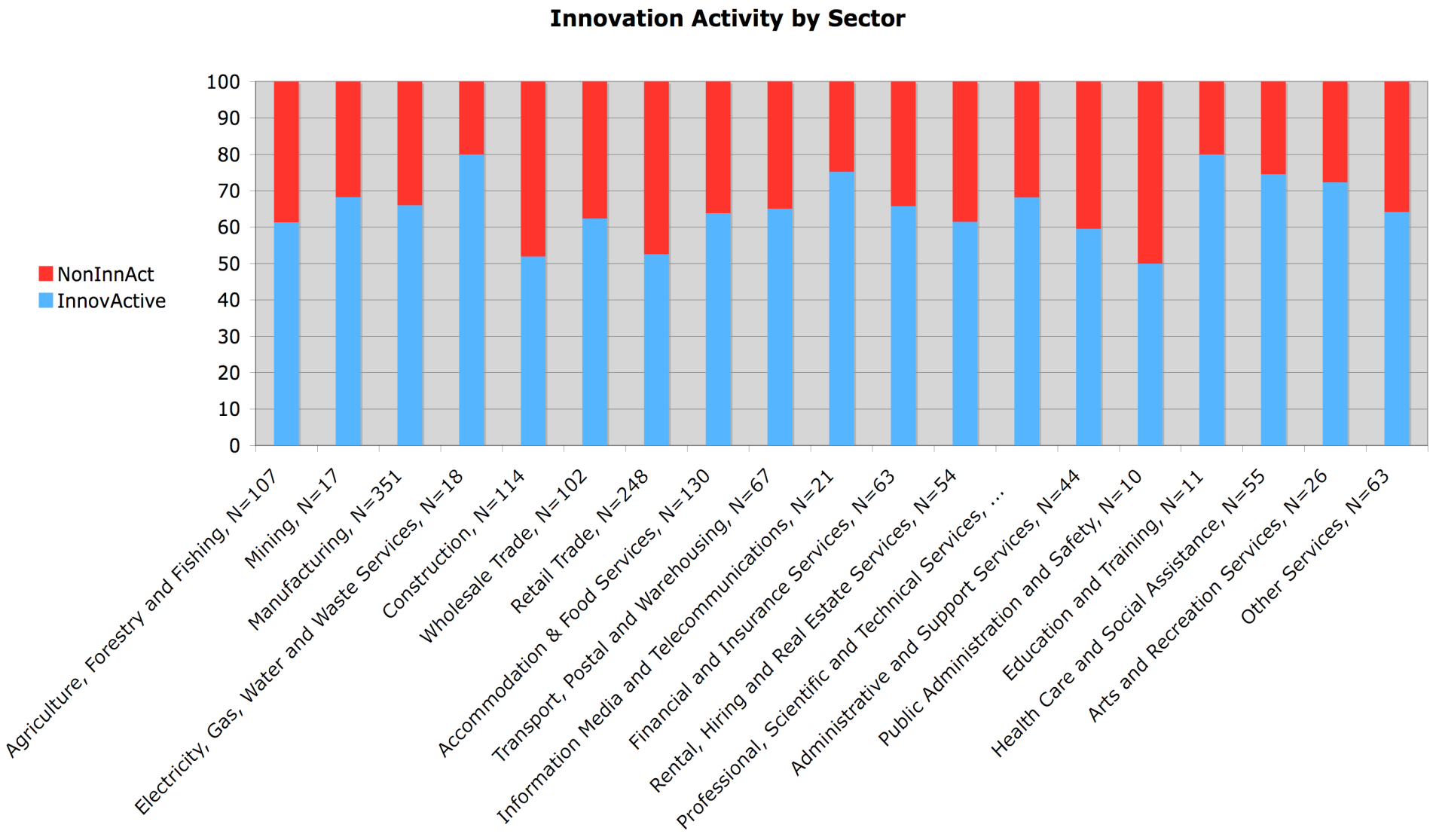
‘Tasmania not perceived as place of innovation’
(*Mercury*, 25 March 2008)



Population required to generate one patent

USA	2,955
Japan	3,914
Switzerland	5,244
Taiwan	5,812
Canada	8,227
Germany	8,778
South Korea	13,653
France	14,658
United Kingdom	16,568
Australia	22,169
Singapore	25,735
Spain	127,273
Argentina	778,261
Mexico	1,267,532
Brazil	1,869,318
India	10,647,319
Indonesia	21,610,345

Myth 2:
Innovation is concentrated in hi-tech.



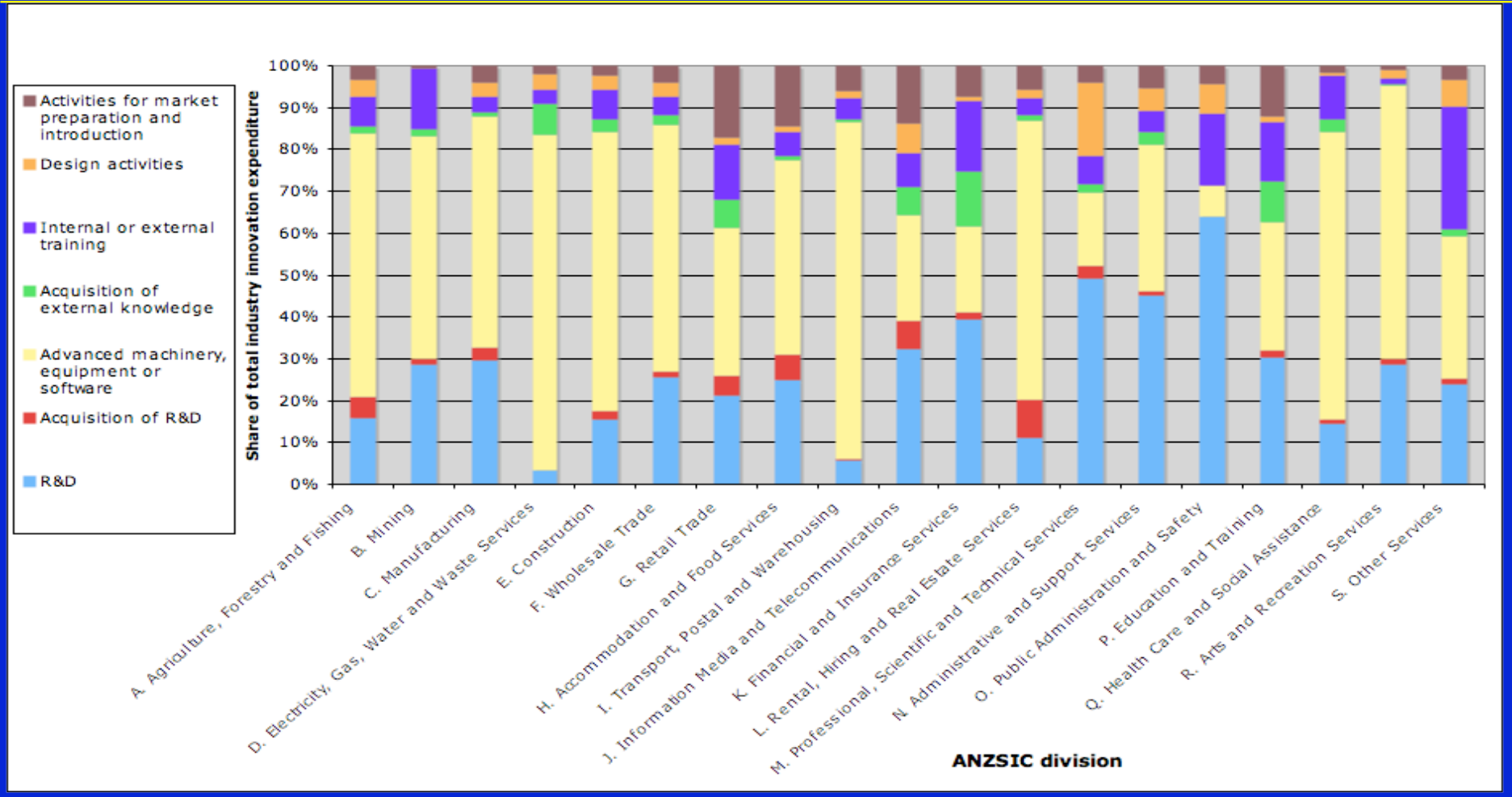
Australia's 'mature' and service-based industries show strong productivity growth.

Productivity advance

Selected comparisons

Australia: 12 months	+0.9%
Australia: 5 years	+1.7%
Australia: 1990s	+2.7%
Australia: 1980s	+1.5%
Communications: 5 years	+5.5%
Transport : 5 years	+3.3%
Accommodation : 5 years	+3.5%
Mining: 5 years	-8.6%
Agriculture: 5 years	+5.4%

Myth 3: Innovation is primarily the commercialisation of science.

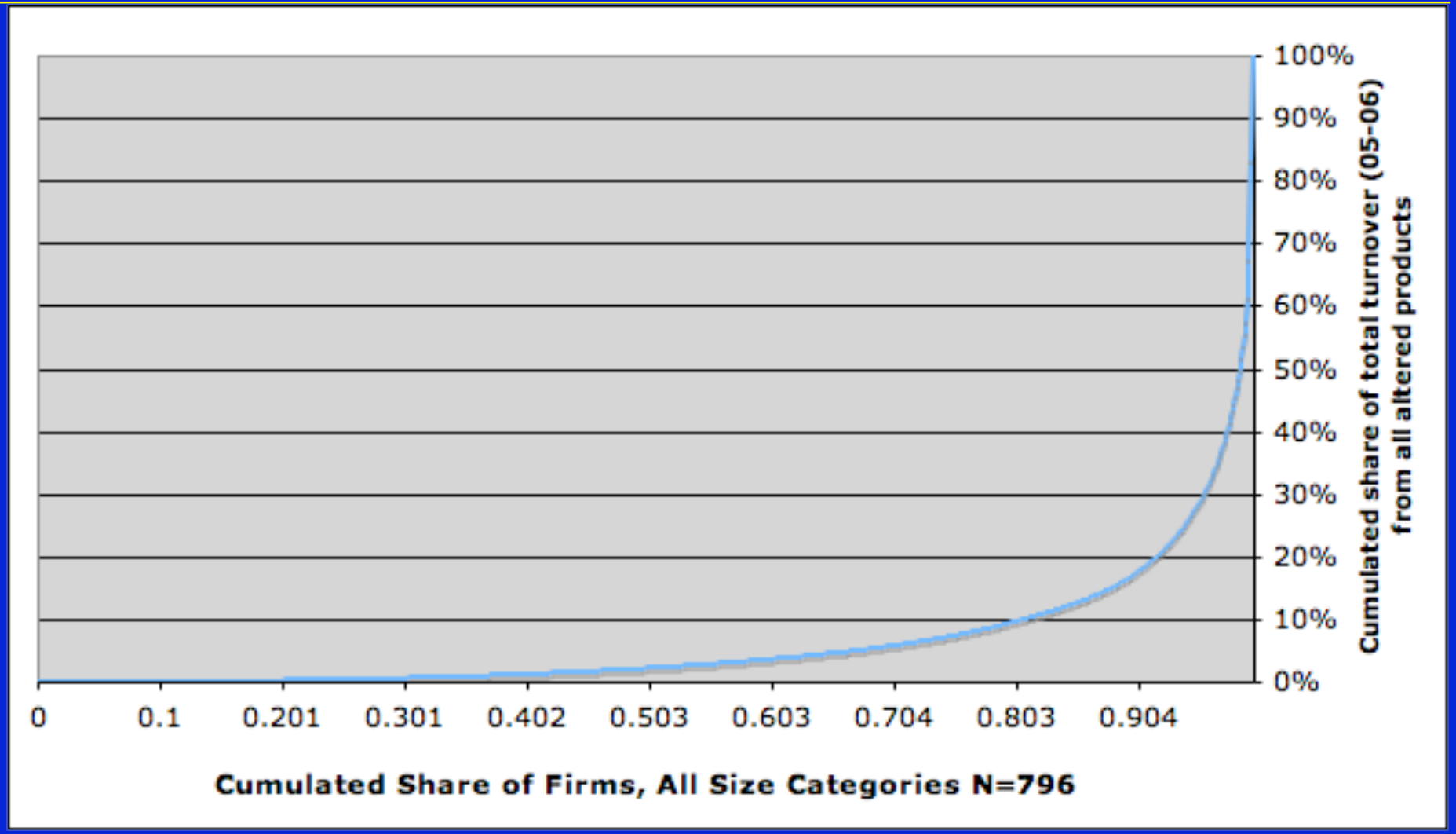


* The pattern of innovation varies considerably from industry to industry.

Myth 3: Innovation is primarily the commercialisation of science.

- 65% of innovations suggested by customer.
- Science follows project initiation.
- Each industry innovates through a unique path:
  - Internal vs external R&D.
  - Product vs process.
  - Radical vs incremental.
  - Design vs features.

Myth 4: Innovation requires a pervasive ‘creative culture’, which Australia doesn’t have.



* 79 firms account for 85% of innovation activity.

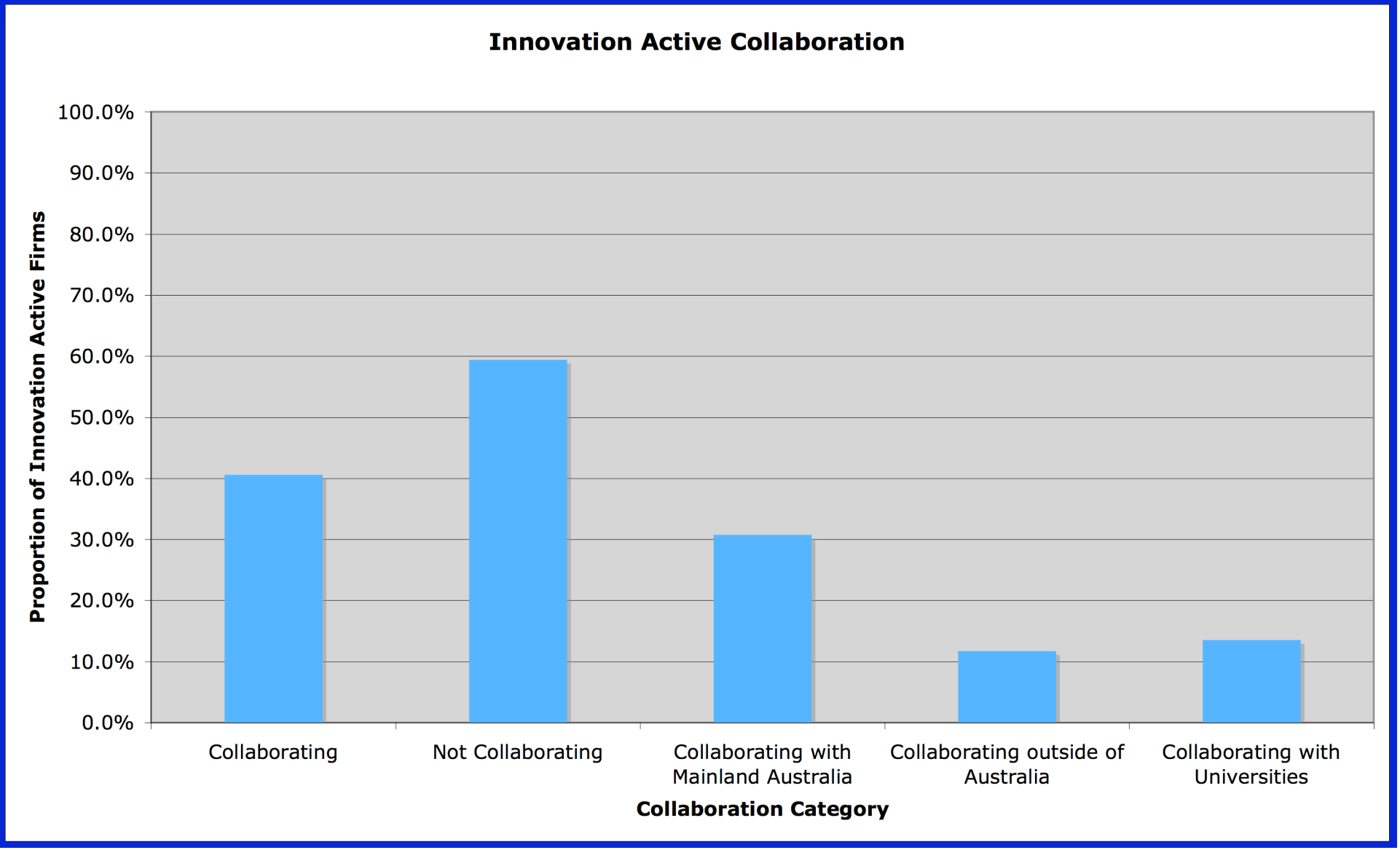
Myth 4: Innovation requires a pervasive 'creative culture', which Australia doesn't have.

- Within industries, innovation is concentrated: Most innovation driven by a few lead businesses.
- Innovative industries tend to cluster regionally:
  - Innovation has a postcode.
- In their traded activity, regions tend to specialise.

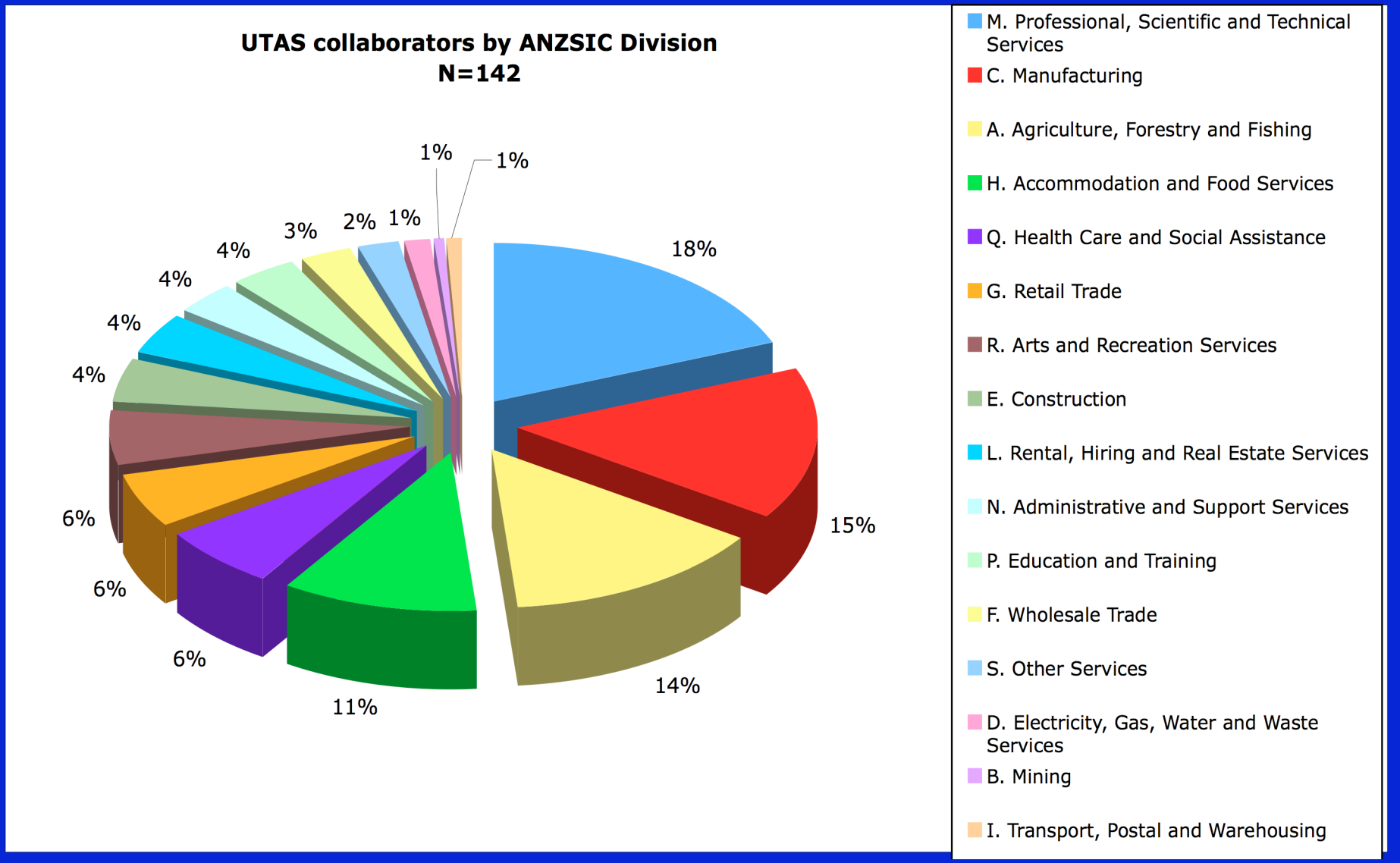
Implication #4

- Australia does *not* need to reengineer its culture to be innovative.
- We don't need to shift all, or average, performance.
- Innovation is possible in all sectors, but focus regionally.
- Support leaders (much easier)!

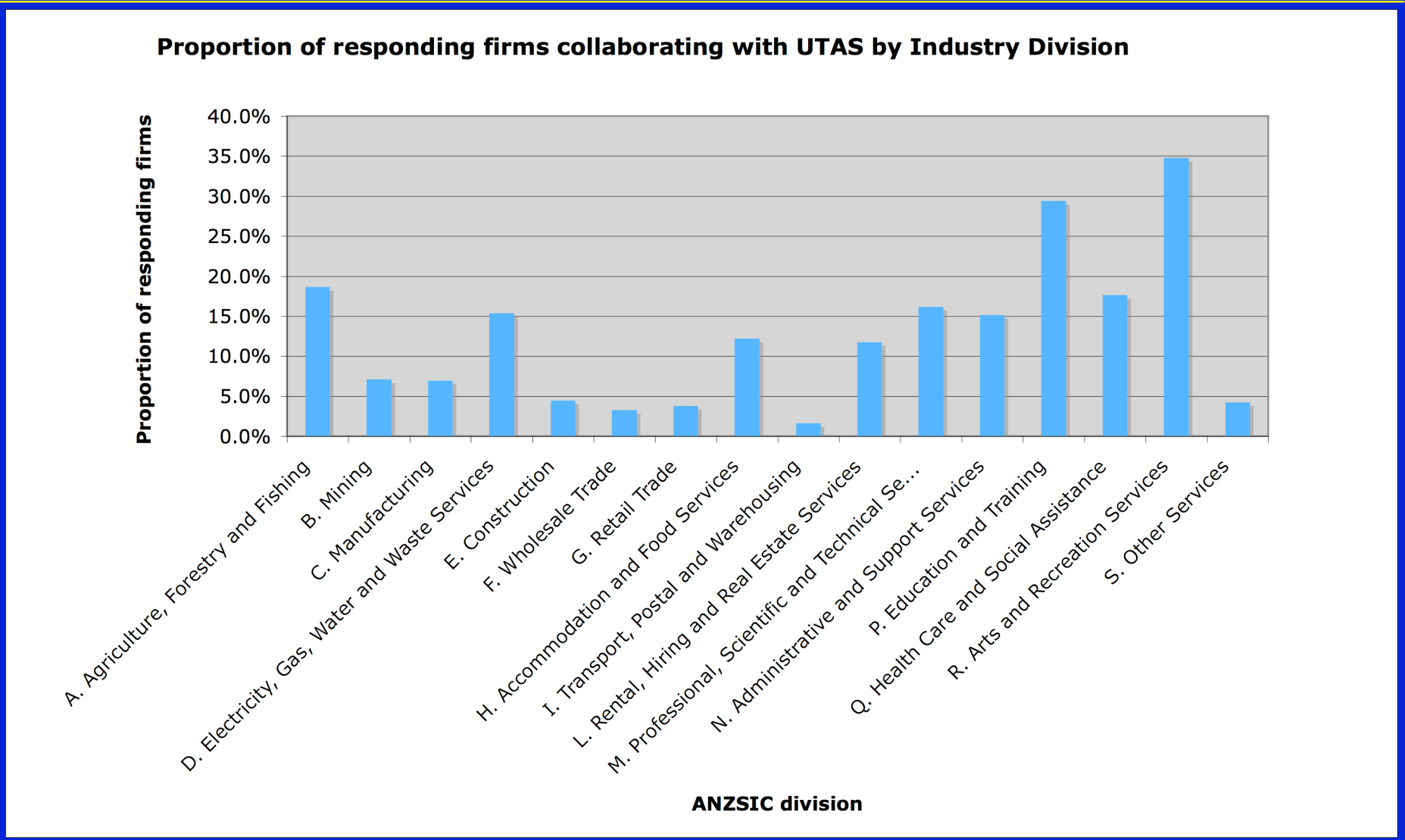
Myth 5: Role of universities is to be ‘invention factories’, whose results need to be commercialised.



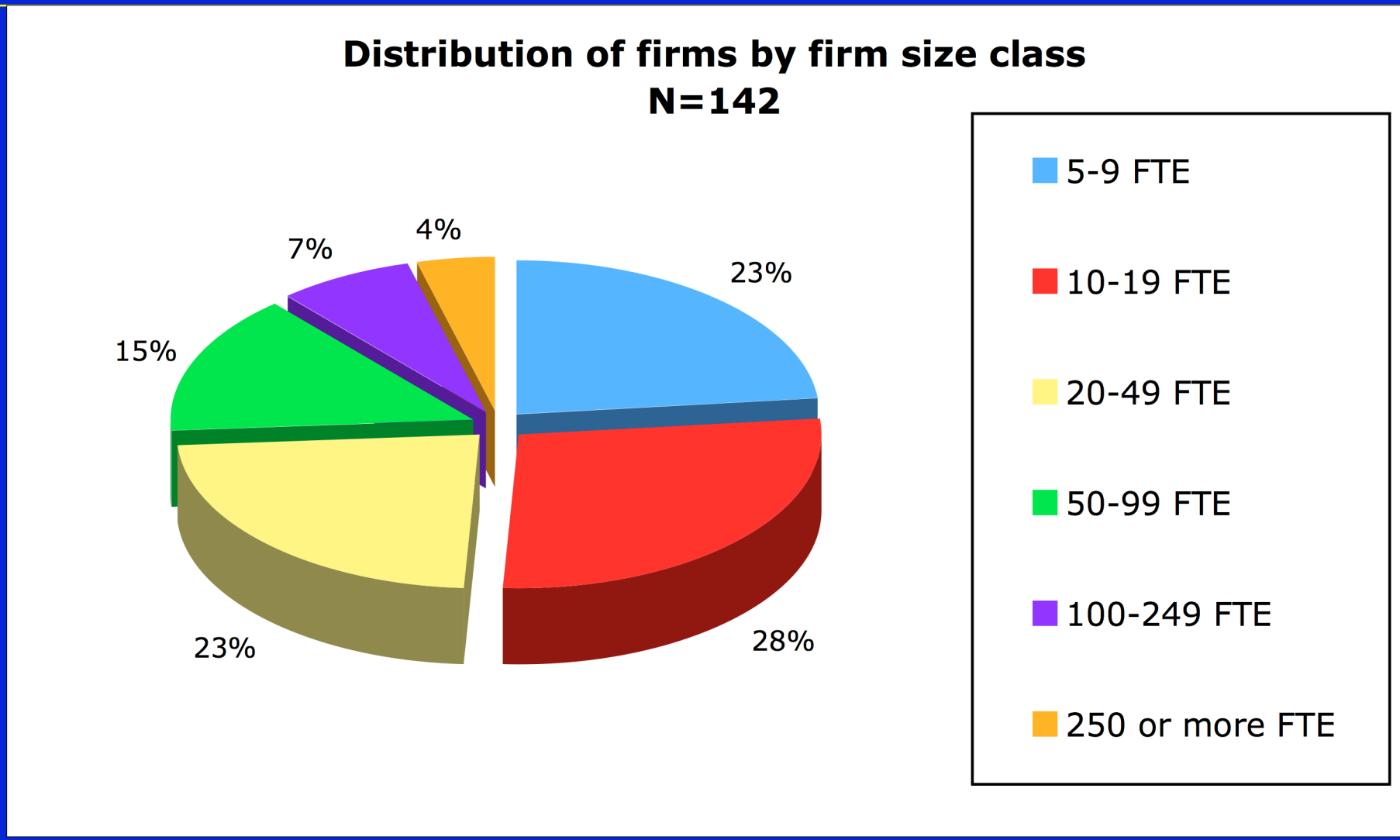
University collaboration spans the entire economy.



University relationships are particularly important in certain sectors.

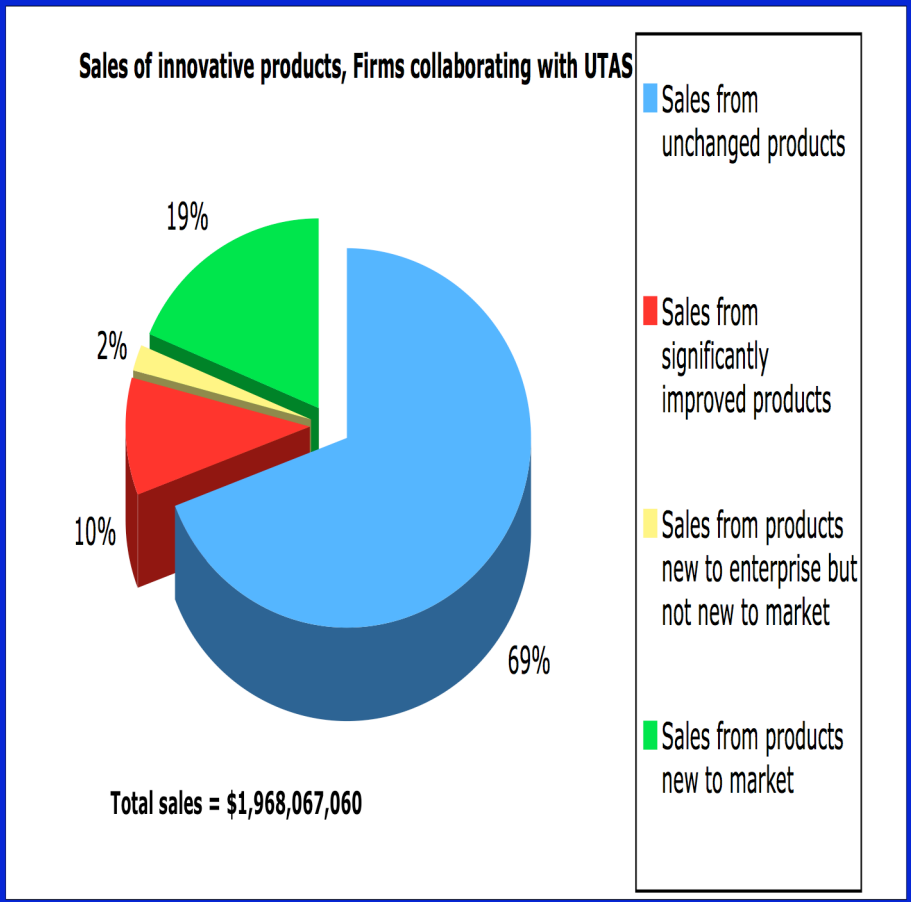


University relationships are not only, or primarily, with large firms.

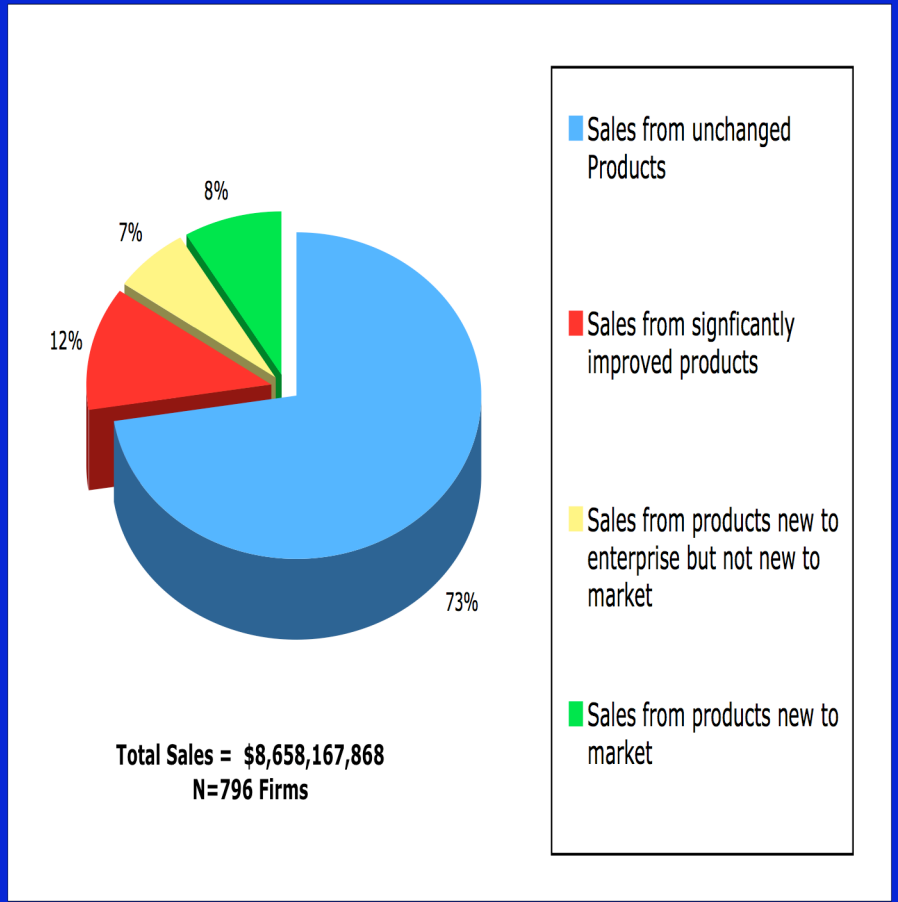


University collaborators are more innovative.

University Collaborators.



University non-Collaborators.



Conclusion

Universities are critical, but their role should be reconsidered:

- Universities are *not* primarily 'ideas factories', inventing things that need to be 'commercialised'.
- They are best viewed as repositories of expertise: companies cannot afford to maintain all fields in-house, but they often need to draw upon sophisticated capabilities for problem-solving during the innovation process.

Conclusion: Universities should make their know-how as accessible as possible, not attempt to finance their operations by selling IP and consulting at maximum return.

- Government incentives should *open* universities, not close them from their communities.